WEB APPLICATION FIREWALL

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This is to certify that I am responsible for the work submitted in this project that the originality work is my own except as specified in the references and acknowledgment and that original work contained herein have not been taken or done by unspecified sources or persons.

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ABSTRACT

The Web Application can easily be attacked by the hackers eventhough with the existence of the normal firewall in the system. This is due to the limitation that the normal firewall does not work in the application layer. The hackers will attack the Web Application using the methods like Structured Query Language (SQL) Injection, Cross Site Scripting (XSS), Command Injection, or Session Manipulation as the normal firewall only open port 80 for Internet connection. Most of the Web Application Firewall is quite costly. There are only few that can be operated under free license. The usage of ModSecurity can solve the problem as it can be downloaded under GNU license. This thesis is attempted to show the benefits of implementing ModSecurity and also the reverse proxy server, instead of just implementing the conventional web server. The penetration test is done to evaluate the performance of the server using this Web Application Firewall. The results showed that ModSecurity and the Reverse Proxy methods can improve the level of security for the web server by forbidding any intrusion to take place through the Web Application. The impacts of the attacks had caused severe damage to the server. The attacks also had congested the physical memory, CPU usage, and CPU clock with or without ModSecurity.

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